

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

Claims 1 and 2 (Cancelled)

3. (Currently Amended) ~~The A~~ wavelength converting laser device ~~of Claim 1~~ comprising:

a laser light producing unit producing laser light;
an optical resonator having facing first and second reflectors; and
a wavelength converter disposed within the optical resonator and converting the laser light into harmonic light, the wavelength converter including a slab optical waveguide structure controlling vertical transverse mode of the laser light and controlling vertical transverse mode of the harmonic light, wherein one of the facing first and second reflectors includes a distributed-reflectance-Bragg-grating-reflector integral with the laser light producing unit.

4. (Currently Amended) ~~The A~~ wavelength converting laser device ~~of Claim 22~~ comprising:

an optical resonator having facing first and second resonators and in which light resonates to produce laser light; and
a wavelength converter disposed within the optical resonator and converting the laser light into harmonic light, the wavelength converter including a slab optical waveguide structure controlling vertical transverse mode of the laser light and controlling vertical transverse mode of the harmonic light, wherein one of the first and second reflectors includes a coating on a facet of the wavelength converter having a curved surface shape that is convex toward a direction outside of the optical resonator.

Claims 5-12 (Cancelled)

13. (Currently Amended) ~~The A~~ wavelength converting laser device of Claim 1, further comprising:

a laser light producing unit producing laser light;
an optical resonator having facing first and second reflectors;
a wavelength converter disposed within the optical resonator and converting the laser light into harmonic light, the wavelength converter including a slab optical waveguide structure controlling vertical transverse mode of the laser light and controlling vertical transverse mode of the harmonic light; and

a third reflector, for reflecting the harmonic light, disposed between the laser light producing unit and the wavelength converter.

14. (Currently Amended) ~~The A~~ wavelength converting laser device of Claim 1, further comprising:

a laser light producing unit producing laser light;
an optical resonator having facing first and second reflectors;
a wavelength converter disposed within the optical resonator and converting the laser light into harmonic light, the wavelength converter including a slab optical waveguide structure controlling vertical transverse mode of the laser light and controlling vertical transverse mode of the harmonic light; and

transverse mode converting means for reducing mode mismatching between a vertical transverse mode of the laser light in the laser light producing unit and a vertical transverse mode of the laser light in the wavelength converter.

15. (Currently Amended) ~~The A~~ wavelength converting laser device of Claim 1, further comprising:

a laser light producing unit producing laser light;
an optical resonator having facing first and second reflectors;
a wavelength converter disposed within the optical resonator and converting the laser light into harmonic light, the wavelength converter including a slab optical

waveguide structure controlling vertical transverse mode of the laser light and controlling vertical transverse mode of the harmonic light; and

temperature control means for controlling temperature of the laser light producing unit and temperature of the wavelength converter.

16. (Currently Amended) ~~The~~ A wavelength converting laser device of ~~Claim 1~~ comprising:

a laser light producing unit producing laser light;

an optical resonator having facing first and second reflectors; and

a wavelength converter disposed within the optical resonator and converting the laser light into harmonic light, the wavelength converter including a slab optical waveguide structure controlling vertical transverse mode of the laser light and controlling vertical transverse mode of the harmonic light, wherein a ratio of a wavelength-shift to temperature change at a lasing wavelength of the laser light of the laser light producing unit is substantially the same as a ratio of a wavelength-shift to temperature change at a phase matching wavelength of the laser light of the wavelength converter.

17. (Currently Amended) A display device, comprising:

a light source producing light;

an optical resonator having facing first and second reflectors, and in which the light resonates to produce laser light; ~~and~~

a wavelength converter disposed within the resonator and converting the laser light into harmonic light, the wavelength converter including a slab optical waveguide structure controlling vertical transverse mode of the laser light and controlling vertical transverse mode of the harmonic light; and

a third reflector, for reflecting the harmonic light, and disposed between the laser light producing unit and the wavelength converter, wherein the wavelength converter produces light for generating an image.

18. (Previously Presented) The display device of Claim 17, wherein the light source for generating an image is a source of green light.

19. (Previously Presented) The display device of Claim 17, wherein the light source for generating an image is a source of blue light.

20. (Previously Presented) The display device of Claim 17, further comprising a liquid crystal material as optical modulating means for generating an image.

21. (Previously Presented) The display device of Claim 17, further comprising digital reflecting means as optical modulating means for generating an image.

22. (Cancelled)